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**Notes:**

1. Untranslatable words are replaced with asterisks (\*\*\*\*).
2. Texts in the figures are not translated and shown as it is.

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Dictionary: Last updated 08/17/2009 / Priority: 1. Information communication technology (ICT) / 2. Electronic engineering / 3. Mathematics/Physics

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## FULL CONTENTS

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### [Claim(s)]

[Claim 1]A laser reflow jig having a slit and a printed circuit board which were hollowed so that a sequence of putt might be surrounded, a guide which positions a surface-mount type connector, and a pin on the occasion of soldering by laser of a surface-mount type connector.

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### [Detailed Description of the Invention]

#### [0001]

[Industrial Application]When this invention carries out laser soldering of the electronic parts mounted in the printed circuit board etc., especially, it positions a printed circuit board, the putt of electronic parts, and a lead, and relates to the art which does and solders damage.

#### [0002]

[Description of the Prior Art]As conventional technology about soldering of laser, the art indicated to JP,H01-84888,U etc. is known, for example.

[0003]This conventional technology is having the opening hollowed so that it might leave a fixed interval to the sequence of the putt for surface-mount mold part article loading and the sequence of putt might be surrounded, and prevents damage to a printed circuit board.

#### [0004]

[Problem to be solved by the invention]However, said conventional technology has a problem of the damage to a surface-mount mold part article, or the soldering poor frequent occurrence by the energy scarcity of laser.

[0005]There is the purpose of this invention in providing the laser reflow jig which can position easily the putt of a printed circuit board, and the lead of a surface-mount mold part article while solving the problem of said conventional technology.

#### [0006]

[Means for solving problem]According to this invention, said purpose is attained by surrounding the whole surface-mount mold part article, and providing a slit in the putt upper part of a printed circuit board, and positioning a surface-mount mold part article by a guide, and positioning a printed circuit board by a pin.

#### [0007]

[Function]With the laser reflow jig by this invention, irradiation of the laser beam to the surface-mount mold part

article at the time of laser soldering can be prevented, and the function which can be positioned easily can be supplied also in positioning of putt and a component lead.

[0008]Thereby, damage to a surface-mount mold part article can be prevented, and improvement in soldering quality can be obtained.

[0009]

[Working example]Hereafter, Drawings explain one embodiment of the laser reflow jig by this invention in detail.

[0010]As shown in drawing 1, the surface-mount type connector 9 is arranged in the upper part of the printed circuit board 1. The component lead 10 is fixed to both the sides of the surface-mount type connector 9, and Lead Kushva 11 is arranged at the tip of the component lead 10. The upper part of the surface-mount type connector 9 is equipped so that the laser reflow jig 1 may cover and hang. As shown in drawing 2 and drawing 3, as for the laser reflow jig 1, the opening of the slit 2 is carried out to the upper part of the putt 8, and the guide 3 is arranged in the pin 4 and its this side at both the sides of the longitudinal direction.

[0011]Next, operation of one embodiment by the above-mentioned composition is explained.

[0012]The surface-mount type connector 9 is mounted in the upper part of the printed circuit board 6. The upper part is equipped with the laser reflow jig 1. The surface-mount type connector 9 positions by the guide 3 of the laser reflow jig 1, and the component lead 10 of the surface-mount type connector 9 and the putt 8 of the printed circuit board 6 are positioned by inserting the pin 4 in the location hole 7. Next, the component lead 10 and the putt 8 are irradiated with the optimal racer light 5, without irradiating a laser beam and irradiating the surface-mount type connector 9 and Lead Kushva 11 from the upper part of the laser reflow jig 1.

[0013]

[Effect of the Invention]It will be as follows if the effect acquired by this invention is explained.

[0014]Namely, in the laser reflow jig used when the printed circuit board by laser and a surface-mount type connector solder, It is a thing possessing the positioning function of the optimal slit for soldering of a laser beam, and a printed circuit board and a surface-mount type connector, and the improvement in soldering quality and damage to a surface-mount type connector can be prevented.

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#### [Brief Description of the Drawings]

[Drawing 1]It is a front sectional view showing one embodiment of the laser reflow jig of this invention.

[Drawing 2]It is an upper surface figure showing one embodiment of the laser reflow jig of this invention.

[Drawing 3]It is a side sectional view showing one embodiment of the laser reflow jig of this invention.

#### [Explanations of letters or numerals]

1 -- Laser reflow jig

2 -- Slit

3 -- Guide

4 -- Pin

5 -- Laser beam

6 -- Printed circuit board

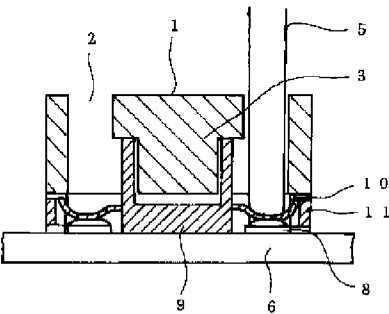
7 -- Location hole

8 -- Putt

- 9 -- Surface-mount type connector
- 10 -- Component lead
- 11 -- Lead Kushva

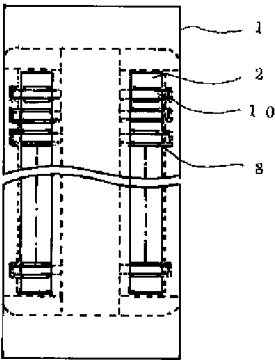
[Drawing 1]

1



[Drawing 2]

2



[Drawing 3]

3

